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WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

| EXAMINER | |
|---|---|
| AUNG, SAN M | |

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| 3657 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/581,268 | EADIE ET AL. | |
| | Examiner | Art Unit | |
| | SAN AUNG | 3657 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *16 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *27-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/24/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

This communication is a Second Office Action Final rejection on the merits. Claims 1-26, as originally filed, are currently pending and have been considered below.

### *Response to Amendment*

The amendment filed September 16, 2009 had been entered. Claims 1-26 have been cancelled and new claims 27-42 have been entered. Therefore, claims 27-42 are now pending in the application.

### *Claim Rejections - 35 USC § 103*

1. **Claims 27, 33-39, 41-42** rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US Patent 5,477,941), and further in view of Clyne K. M. et al. (WO-0118558 A1, from IDS) and Nelson et al. (US Patent 5,236,063).

**As per claim 27**, Kumar et al. discloses On-Board Lubrication System for Direct Application to Curve and Tangent Railroad Track comprising:

an applicator (14) for application of the liquid composition (Figure 3); and

a processing device for receiving the topological information, and controlling the application of the liquid composition, wherein control of the application of the liquid composition is based on the topological information received by the processing device (Column 5, Lines 1-11).

However, Kumar et al. fails to explicitly disclose that,

a topological device comprising a global position system (GPS) for acquiring topological information of a rail system in real-time; and

the processing device is accessed remotely at a site separate from a rail car or a train consist.

Clyne K. M. et al. discloses Method and Apparatus for Measuring Navigational Parameter of a Locomotive comprising:

a topological device comprising a global position system (GPS) for acquiring topological information of a rail system in real-time (Page 6, Line 24-page 7, Line 8).

However, Kumar et al. and Clyne K. M. et al. both silent about the processing device is accessed remotely at a site separate from a rail car or a train consists.

Nelson et al. discloses Rail Lubrication Device comprising:

the processing device is accessed remotely at a site separate from a rail car or a train consists (Column 4, Lines 35-39).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the rail road lubricating system of the Kumar et al. to include the topological device and which comprising a global position system (GPS) for acquiring topological information of a rail system in real-time as taught by Clyne K.M. et al. in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail and also to use processing device is accessed remotely at a site separate from a rail car or a train consists as taught by Nelson et al. in order to control the application of the lubricant any remote region efficiently and can stop immediately in case of emergency.

**As per claim 33**, Kumar et al. discloses the processing device comprises a database having topological information of the rail system (Column 5, Lines 1-7).

However, Kumar et al. fails to explicitly disclose that the processing device coordinates the topological information acquired from the GPS with the topological information of the database for controlling the application of the liquid composition.

Clyne K. M. et al. discloses the processing device coordinates the topological information acquired from the GPS with the topological information of the database for controlling the application of the liquid composition (Page 6, Line 24-page 7, lines 9, and page 9, lines 5-8).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the rail road lubricating system of the Kumar et al. to include the processing device coordinates the topological information acquired from the GPS with the topological information of the database for controlling the application of the liquid composition as taught by Clyne K. M. et al. in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.

**As per claim 34**, Kumar et al. discloses the processing device comprises one or more than one electronic component selected from the group consisting of a microprocessor, a programmable logic controller, a computer, and a combination thereof 91! 5, Lines 1-7, Figure 5).

**As per claim 35**, Kumar et al. discloses the one or more than one electronic component has an operator-actuated interface (Column 6, Lines 15-22).

**As per claim 36**, Kumar et al. discloses all the structural elements of the claimed invention but fails to explicitly disclose the topological information received by the processing device for controlling the application of the liquid composition is selected

from the group consisting of orientation of the rail car in the rail system, speed of the rail car, curve sensing, changes in elevation, and a combination thereof.

Clyne K. M. et al. discloses the topological information received by the processing device for controlling the application of the liquid composition is selected from the group consisting of orientation of the rail car in the rail system, speed of the rail car, curve sensing, changes in elevation, and a combination thereof (Page 6, Line 24-Page 7, lines 8, and page 9, lines 5-8).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar to include the topological information received by the processing device for controlling the application of the liquid composition is selected from the group consisting of orientation of the rail car in the rail system, speed of the rail car, curve sensing, changes in elevation, and a combination as taught by Clyne K. M. et al. in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.

**As per claim 37**, Kumar et al. discloses all the structural elements of the claimed invention but fails to explicitly disclose the topological information acquired by the GPS and received by the processing device is selected from the group consisting of latitude, longitude, speed, heading, altitude, and a combination thereof.

Clyne K. M. et al. discloses the topological information acquired by the GPS and received by the processing device is selected from the group consisting of latitude, longitude, speed, heading, altitude, and a combination thereof (Page 6, Line 26—page 7, line 4).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar et al. to include the topological information acquired by the GPS and received by the processing device is selected from the group consisting of latitude, longitude, speed, heading, altitude, and a combination as taught by Clyne K. M. et al. in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.

**As per claim 38**, Kumar et al. discloses the processing device with topological information regarding speed of the rail car in the rail system to control a rate of application of the liquid composition (Column 5, Lines 38-42).

However, Kumar fails to explicitly disclose that GPS provides the topological information.

Clyne K. M. et al. discloses a topological device comprising a global position system (GPS) for acquiring topological information of a rail system in real-time (Page 6, Line 24-page 7, Line 8).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the rail road lubricating system of the Kumar et al. to include the topological device and which comprising a global position system (GPS) for acquiring topological information of a rail system in real-time as taught by Clyne K.M. et al. in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.

**As per claim 39**, Kumar et al. discloses provides the processing device with topological information regarding changes in position of the rail car in the rail system to determine whether or not the rail car is negotiating a curved portion of a rail track in the rail system and the processing device controls application of the liquid composition accordingly (Column 5, Lines 38-42).

However, Kumar fails to explicitly disclose that GPS provides the topological information.

Clyne K. M. et al. discloses a topological device comprising a global position system (GPS) for acquiring topological information of a rail system in real-time (Page 6, Line 24-page 7, Line 8).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the rail road lubricating system of the Kumar et al. to include the topological device and which comprising a global position system (GPS) for acquiring topological information of a rail system in real-time as taught by Clyne K.M. et al. in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.

**As per claim 41,** Kumar et al. discloses a method of applying a liquid composition in a rail system using the liquid composition application system (Column 5, Lines 1- 61).

**As per claim 42**, Kumar et al. discloses On-Board Lubrication System for Direct Application to Curve and Tangent Railroad Track comprising:

providing the liquid composition application system (Figure 5);and

wherein control of the application of the liquid composition is based on the topological information received by the processing device (Column 5, Lines 1-11).

However, Kumar et al. fails to explicitly disclose that;

acquiring topological information of the rail system in real-time using the GPS;

processing the topological information remotely at a site separate from the rail car or train consist in the rail system and controlling application of the liquid composition using the processing device,

Clyne K. M. et al. discloses acquiring topological information of the rail system in real-time using the GPS (Page 6, Line24 – page 7, lines 9, page 9, and lines 5-8).

However, Kumar et al. and Clyne K. M. et al. silent about processing the topological information remotely at a site separate from the rail car or train consist in the rail system and controlling application of the liquid composition using the processing device.

Nelson et al. discloses processing the topological information remotely at a site separate from the rail car or train consist in the rail system and controlling application of the liquid composition using the processing device (Column 4, Lines 35-39).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the rail road lubricating system of the Kumar et al. to include the topological device and which comprising a global position system (GPS) for acquiring topological information of a rail system in real-time as taught by Clyne K.M. et al. in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail and also to use processing device is accessed remotely at

a site separate from a rail car or a train consists as taught by Nelson et al. in order to control the application of the lubricant any remote region efficiently and can stop immediately in case of emergency.

2. **Claims 28-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US Patent 5,477,941) as modified by Clyne K. M. et al. (WO-0118558 A1, from IDS) and Nelson et al. (US Patent 5,236,063) as applied to claim 27 above, and further in view of Kast et al. (US Patent 6,578,669 B2).

**As per claim 28**, Kumar et al. discloses:

one or more than one reservoir for holding the liquid composition (50, 51, Figure 5);

a pipe connected to the one or more than one reservoir (13, Figure 5);

one or more than one dispensing nozzle (17, 18, Figure 5).

However, Kumar et al. fails to explicitly disclose a pump, in fluid communication with the pipe, for moving the liquid composition from the one or more than one reservoir to the one or more than one dispensing nozzle.

Kast et al. discloses Rail Lubrication System comprising:

a pump (38, 64), in fluid communication with the pipe, for moving the liquid composition from the one or more than one reservoir to the one or more than one dispensing nozzle (Figure 2).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar et al. to include the pump, in fluid communication with the pipe, for moving the liquid

composition from the one or more than one reservoir to the one or more than one dispensing nozzle as taught by Kast et al. in order to provide continuously supply of a lubricant along the lubricant path and can apply relatively thick rail lubricant to the rail.

**As per claim 29**, Kumar et al. as modified by Clyne K. M. et al. and Nelson et al. disclose all the structural elements of the claimed invention but fails to explicitly disclose the processing device comprises a controller for controlling operation of the pump.

Kast et al. discloses the processing device comprises a controller for controlling operation of the pump 9by means of controlling electric motor, Figure 2).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubrication system of the Kumar et al. as modified by Clyne K. M. et al. and Nelson et al. to include the pump and the processing device comprises a controller for controlling operation of the pump as taught by Kast et al. in order to control the application of the lubricant efficiently and provide continuously supply of a lubricant along the lubricant path and can apply relatively thick rail lubricant to the rail.

**As per claim 30**, Kumar et al. discloses the controller is selected from the group consisting of a programmable logic controller, a microprocessor and a computer (Column 5, Lines 1-7, Figure 5).

**As per claim 31**, Kumar et al. as modified by Clyne K. M. et al. and Nelson et al. disclose all the structural elements of the claimed invention but fails to explicitly disclose the processing device comprises a metering device for controlling operation of the pump.

Kast et al. discloses disclose all the structural elements of the claimed invention but fails to explicitly disclose the processing device comprises a metering device for controlling operation of the pump (60, Column 4, Lines 60-67, Figure 2).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar et al. as modified by Clyne K. M. et al. and Nelson et al. to include the metering device for controlling operation of the pump as taught by Kast et al. in order to control the necessary lubricant amount effectively.

**As per claim 32**, Kumar et al. discloses a source of pressurized air connected to the one or more than one dispensing nozzle to dispense the liquid composition as an atomized spray (Column 6, Lines 23-26).

3. **Claim 40** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US Patent 5,477,941) as modified by Clyne K. M. et al. (WO-0118558 A1, from IDS) and Nelson et al. (US Patent 5,236,063) as applied to claim 27 above, and further in view of Gray (US Patent 6,434,452 B1).

**As per claim 40**, Kumar et al. as modified by Clyne K. M. et al. and Nelson et al. disclose all the structural elements of the claimed invention but fails to explicitly disclose the GPS provides the processing device with topological information regarding changes in elevation of the rail car in the rail system to determine whether or not the rail car is negotiating an inclining or declining segment of a rail track in the rail system and the processing device controls application of the liquid composition accordingly.

Gray discloses Track Data Base integrity Monitor for Enhanced Railroad Safety Distributed Power comprising;

the GPS provides the processing device with topological information regarding changes in elevation of the rail car in the rail system to determine whether or not the rail car is negotiating an inclining or declining segment of a rail track in the rail system and the processing device controls application of the liquid composition accordingly (Column 5, Lines 30-45).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the rail road lubricating system of the Kumar et al. as modified by Clyne K. M. et al. and Nelson et al. to include the topological information regarding changes in elevation of the rail car in the rail system to determine whether or not the rail car is negotiating an inclining or declining segment of a rail track in the rail system and the processing device controls application of the liquid composition accordingly as taught by Gray in order to provide quickly and reliable meet the need for a track database integrity monitor as part of an enhanced railroad lubrication.

### *Response to Arguments*

4. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAN AUNG whose telephone number is (571)270-5792. The examiner can normally be reached on Mon-to- Fri 7:30 am- to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

San M Aung

/Robert A. Siconolfi/
Supervisory Patent Examiner, Art Unit 3657